

Plan for Chapter 4 Matrices**Day 2 of 21 Friday October 16, Monday October 19**

4.1 Organizing Data Into Matrices

4.2 Adding and Subtracting Matrices

4.3 Matrix Multiplication

Homework #2

Page 174: 11, 17

Page 182: 5 – 8 (all), Page 184: 42 – 47 (all) – with graphing calculator

Page 183: 11 – 18 (all), 20 – 29 (all), c38 – no graphing calculator

Day 3 of 21 Tuesday October 20, Wednesday October 21

4.5 2×2 Matrices, Determinants, and Inverses

Homework #3

Page 199: 22, 23, 24, 26 – 30 (all), 31 – 43 (odd), 47

Day 4 of 21 Thursday October 22, Friday October 23

4.6 3×3 Matrices, Determinants, and Inverses

4.8 Augmented Matrices and Systems (Cramer's Rule only)

Homework #4

Page 205: 10, 11, 18 – 25 (all), 29, 30

Page 220: 2, 3, 24

Day 5 of 21 Monday October 26, Tuesday October 27

4.7 Inverse Matrices and Systems

Homework #5

Page 213: 16, 26 – 33 (all), c34, c35, 42

Day 6 of 21 Wednesday October 28, Thursday October 29

Chapter 4 Review (see class handout)

Homework #6

Chapter 4 Review (see class handout)

Day 7 of 21 Friday October 30, Monday November 2

Chapter 4 Celebration – Matrices

Homework Answers

Lesson 4.2, Page 174

11. $\begin{bmatrix} -9 & -2 & 12 \\ -15 & 11 & -7 \end{bmatrix}$

17. $x = 2, t = \frac{3}{5}$

Lesson 4.3, Page 182

5. $\begin{bmatrix} 9 & 2 \\ 2 & 6 \\ 3 & -10 \end{bmatrix}$

6. $\begin{bmatrix} 3 & 14 \\ 22 & -14 \\ 1 & 10 \end{bmatrix}$

7. $\begin{bmatrix} 19 & 11 \\ -12 & 10 \end{bmatrix}$

8. $\begin{bmatrix} 21 & 3 \\ 2 & 16 \\ 7 & -25 \end{bmatrix}$

Lesson 4.3, Page 184

42. $\begin{bmatrix} 1 & -6 & -5 \\ 6 & 1 & -5 \\ -3 & -12 & 0 \end{bmatrix}$

43. $\begin{bmatrix} 9 & -6 \\ 15 & -3 \\ -6 & -12 \end{bmatrix}$

44. $\begin{bmatrix} 17 & -24 \\ -33 & -7 \\ 69 & -18 \end{bmatrix}$

45. $\begin{bmatrix} 17 & -24 \\ -33 & -7 \\ 69 & -18 \end{bmatrix}$

46. $\begin{bmatrix} -3 & 12 & -1 \\ -2 & 3 & 5 \\ -4 & -3 & -4 \end{bmatrix}$

47. $\begin{bmatrix} 34 & -1 \\ 6 & -13 \\ -7 & 16 \end{bmatrix}$

Lesson 4.3, Page 183

11. $\begin{bmatrix} 5 & -12 \\ 9 & -6 \end{bmatrix}$

12. $\begin{bmatrix} -3 & 4 \\ -21 & 2 \end{bmatrix}$

13. $\begin{bmatrix} -8 & 0 \\ 0 & -8 \end{bmatrix}$

14. $[34]$

15. $[34 \ 0]$

16. $[0 \ 34]$

17. $\begin{bmatrix} -15 & 0 \\ 25 & 0 \end{bmatrix}$

18. $\begin{bmatrix} -1 & 0 \\ 1 & 5 \\ 0 & -3 \end{bmatrix}$

20. defined

21. defined

22. defined

23. undefined

24. defined

25. undefined

26. undefined

27. defined

28. defined

29. defined

38. $\begin{bmatrix} 17 & 2 \\ \frac{7}{5} & \frac{-11}{5} \\ \frac{-2}{3} & \frac{-14}{3} \end{bmatrix}$

Lesson 4.5, Page 199

22. $\begin{bmatrix} -15 & -17 \\ 26 & 29 \end{bmatrix}$

23. no solution, determinant is 0

24. $\begin{bmatrix} 10 \\ 15 \end{bmatrix}$

26. 36

27. -120

28. 0

29. 2

30. 9

31. yes

33. no

$$35. \begin{bmatrix} -5 & 7 \\ 3 & -4 \end{bmatrix}$$

$$37. \begin{bmatrix} 0.5 & 0 \\ 0 & 0.5 \end{bmatrix}$$

$$39. \begin{bmatrix} 0 & \frac{1}{2} \\ \frac{1}{3} & \frac{1}{6} \end{bmatrix}$$

41. no

$$43. \begin{bmatrix} 8 & -2 \\ -6 & 1 \end{bmatrix}$$

$$47. \begin{bmatrix} -3 & 2 \\ -5 & 8 \end{bmatrix}$$

Lesson 4.6, Page 205

$$10. \begin{bmatrix} 3 \\ -2 \\ 2 \end{bmatrix}$$

$$11. \begin{bmatrix} 5 \\ 8 \\ 2 \end{bmatrix}$$

18. -30

19. -3

20. 25

21. 1

$$22. \begin{bmatrix} -4 & -3.5 & 2 \\ -5 & -5 & 3 \\ 2 & 2 & -1 \end{bmatrix}$$

$$23. \begin{bmatrix} 0.4 & 0.4 & 0.2 \\ -0.6 & -0.6 & 0.2 \\ -0.2 & 0.8 & 0.4 \end{bmatrix}$$

$$24. \begin{bmatrix} 0 & \frac{1}{7} & \frac{2}{7} \\ \frac{1}{4} & \frac{3}{14} & \frac{-1}{14} \\ \frac{1}{2} & 0 & 0 \end{bmatrix}$$

25. no inverse

$$29. \begin{bmatrix} 10 \\ 3 \\ -2 \end{bmatrix}$$

$$30. \begin{bmatrix} -1 & 2 & 6 \\ 0 & 0 & 5 \\ 8 & -1 & 0 \end{bmatrix}$$

Lesson 4.8, Page 220

2. (3,1)

3. (3,1)

24. (2,4)

Lesson 4.7, Page 213

16. (2.5, 3.5, 3)

26. (-2, -1)

27. (2,4)

28. (-1,0)

29. (4,1,3)

30. (5,0,1)

31. (-19,22,13)

32. (1,0,3)

33. (2,-1,3)

34. (1,1,1,1)

35. (2,0,2,0)

42. 5 pounds chicken, 10 pounds rice, and 3 pounds shellfish